

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Amendment of Part 101 of the Commission's	)	WT Docket No. 10-153
Rules to Facilitate the Use of Microwave for	)	
Wireless Backhaul and Other Uses and to	)	
Provide Additional Flexibility to Broadcast	)	
Auxiliary Service and Operational Fixed	)	
Microwave Licensees	)	

**REPLY COMMENTS ON PETITION FOR RECONSIDERATION**

Verizon and Verizon Wireless<sup>1</sup> agree with the Opposition of the Fixed Wireless Communications Coalition (“FWCC”) to the Petition for Reconsideration (“Petition”) filed by Wireless Strategies Inc. (“WSI”).<sup>2</sup> The Commission correctly determined that eliminating the minimum Category B standards for Fixed Service (“FS”) microwave links, as WSI proposed, would authorize the deployment of inefficient antennas and would “result in an increased potential for interference and make it more difficult for other licensees to share spectrum,” and declined to take up WSI’s proposal.<sup>3</sup> As FWCC demonstrates, WSI’s Petition supplies no valid

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<sup>1</sup> In addition to Verizon Wireless, the Verizon companies participating in this filing are the regulated, wholly owned subsidiaries of Verizon Communications Inc.

<sup>2</sup> Petition for Reconsideration of Wireless Strategies, Inc., filed Sept. 6, 2012, of *Amendment of Part 101 of the Commission’s Rules to Facilitate the Use of Microwave for Wireless Backhaul and Other Uses and to Provide Additional Flexibility to Broadcast Auxiliary Service and Operational Fixed Microwave Licensees*, WT Docket No. 10-153, Second Report and Order, Second Further Notice of Proposed Rulemaking, Second Notice of Inquiry, Order on Reconsideration, and Memorandum Opinion and Order, FCC 12-87, 27 FCC Rcd. 9735 (Aug. 3, 2012) (“Order & NPRM”). As an initial matter, the Petition is procedurally defective and should be dismissed because it does not seek reconsideration of a “final action” (47 C.F.R. § 1.429) but rather complains of a statement that the Commission makes the *NPRM* portion of the. Order & NPRM, ¶ 75. WSI did not file comments in response to any of the issues raised in the NPRM.

<sup>3</sup> Order & NPRM, ¶ 75.

ground for the Commission to reconsider that determination. WSI's Petition should thus be denied.

**A. WSI's Proposal Would Impede the Efficient Use of Spectrum and Add Unnecessary Complexity and Costs to the Spectrum Sharing Process.**

The Petition is WSI's latest effort to persuade the Commission to authorize an "underclass" of stations in the 6 GHz and 11 GHz microwave bands that do not comply with minimum standards that promote the efficient – and shared – use of such spectrum. Previously, WSI proposed permitting "auxiliary stations" within the coordination contour of primary links, and the Commission appropriately rejected that proposal because of concerns about interference and about creating perverse incentives to design inefficient primary links that radiate excessive power.<sup>4</sup> This latest WSI proposal would create similar incentives for operators to employ spectrum-inefficient strategies to protect links using non-compliant antennas from the requirement to upgrade the antennas or cease operation.<sup>5</sup>

Allowing the introduction of station use of non-compliant antennas in these critical frequency bands would remove key technical requirements that result in spectrum efficiency and spectrum sharing. New entrants are currently able to plan and build new paths without undue concern that unexpected interference will affect system performance. Small non-compliant antennas, if allowed, would not only create more direct path interference conflicts, but would also be significant sources of scattering and reflective interference that cannot be

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<sup>4</sup> *See Amendment of Part 101 of the Commission's Rules to Facilitate the Use of Microwave for Wireless Backhaul and Other Uses and to Provide Additional Flexibility to Broadcast Auxiliary Service and Operational Fixed Microwave Licensees*, WT Docket No. 10-153, Report and Order, Further Notice of Proposed Rulemaking, and Memorandum Opinion and Order, FCC 11-120, 26 FCC Rcd. 11614 (Aug. 9, 2011) ("August 2011 Order"), ¶¶ 59-68.

<sup>5</sup> As the Commission noted, WSI's previous frequency coordination and licensing activity confirms that such concerns are not merely theoretical. *See* August 2011 Order, ¶ 66.

accurately predicted. Approval of the WSI proposal would endanger operations of both current and future users of the bands.

Indeed, WSI's proposal would take antenna standards in exactly the wrong direction. Manufacturers are continuing to make substantial advances in antenna design, and the use of efficient antennas increases the ability of multiple operators to share scarce spectrum. Altering the Category B standards as proposed by WSI is not justified. The resulting losses in spectral efficiency would hinder the ability of operators to use this key lower frequency microwave spectrum for longer links in support of critical services such as wireless backhaul.

#### **B. WSI's Purported Justifications Are Meritless.**

WSI's principal justifications for its proposal are that Rule 101.103 prevents "any" antenna from causing interference with existing licensees, and that Rule 101.115(f) requires any operator not using a Category A antenna to avoid interfering with a new Category A applicant. If this "logic" were accepted, elimination of *all* interference-related technical standards would be justified. But spectrum sharing historically has worked well in these bands because the existence of minimum engineering standards ensures a reasonable level of certainty for all existing and potential operators. As discussed above, the increased risk of unpredictable and unexpected interference associated with WSI's proposal would both deter new efforts to design paths and potentially compromise existing systems.

The deployment of inefficient sub-Standard B antennas would also have a high potential to delay and complicate coordination efforts given that operators using such antennas may resist modifying their operations or performing the antenna upgrades necessary to comply with Rules 101.103 & 101.115(f). The potential for coordination and operational disputes would increase substantially – and with it the potential for increased costs and delays.

By casting its proposal as purportedly making it more economical to serve “un-served” and “underserved” areas (Petition at 2), WSI appears to imply that its proposal may benefit consumers such as end-user mobile customers. Of course, microwave backhaul is a backhaul option available to mobile service providers, but is not used to directly serve end users. The reality is that eliminating the minimum Category B standards would result, on an industry-wide basis, in *less* usable spectrum for backhaul and other services and would *increase* costs for those operating existing mobile systems or building new primary ones. Even if WSI could show that using non-compliant antennas would materially reduce the overall costs mobile service operators face when extending service to underserved areas (which its Petition does not), the harmful externalities created by non-compliant antennas – including the increased costs imposed on potential and existing operators using compliant antennas – would outweigh any such benefits.

**C. To the Extent WSI’s Antenna Strategy Has Merit, Operators Can Pursue it Using Other Spectrum.**

If WSI or other operators want to use antennas that do not comply with the standards for the 6 and 11 GHz bands, they may do so today using area-licensed fixed microwave and millimeter wave bands. *See* August 2011 Order, ¶ 67 (finding that an additional reason to reject the “auxiliary station” proposal was that the operations contemplated by WSI could be accommodated in several upper microwave bands for which the Commission has issued geographic area licenses). Higher frequency site-licensed microwave and millimeter wave bands are also available where smaller antennas do meet existing standards.

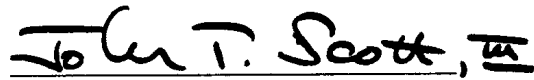
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Given the importance of wireless backhaul to the development of the nation’s communications infrastructure, including future 4G deployment, it is crucial that the

Commission ensure that available microwave spectrum is properly managed. The Commission correctly determined that sound public policy mandates rejecting WSI's proposal to abandon minimum antenna standards. WSI's Petition advances no valid reasons why that determination was incorrect, and should accordingly be denied.

Respectfully submitted,

*Of Counsel:*  
Michael E. Glover

A handwritten signature in black ink that reads "John T. Scott, III". The signature is written in a cursive style with a horizontal line underneath the name.

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December 17, 2012

**Certificate of Service**

I hereby certify that on this 17<sup>th</sup> day of December, a copy of the foregoing “Reply Comments on Petition for Reconsideration” by Verizon Wireless in WT Docket 10-153 were sent by US Mail to the following party:

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\_\_\_\_\_/s/\_\_\_\_\_  
Sarah E. Trosch